

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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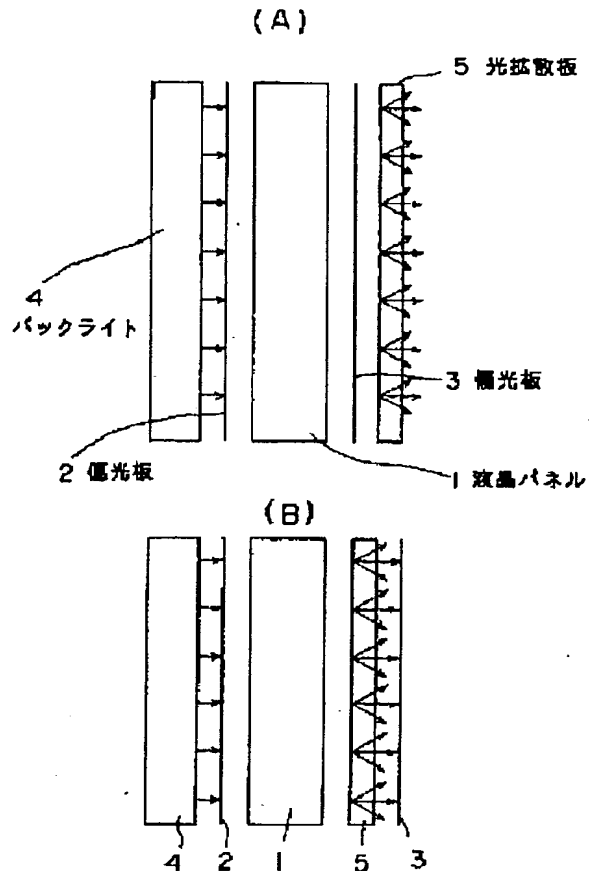
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TITLE : LIQUID CRYSTAL DISPLAY DEVICE



**ABSTRACT :** **PURPOSE:** To obtain sufficient display lightness in a diagonal direction while maintaining illumination efficiency by disposing a directional back light having a nearly parallel exit light distribution on the rear surface side of a liquid crystal panel and disposing a light diffusion plate on the front surface side.

**CONSTITUTION:** A pair of polarizing plates 2, 3 are disposed on both surfaces of the liquid crystal panel 1. In actuality, these plates may be stuck on both sides of the liquid crystal panel 1. A back light 4 is disposed via the one polarizing plate 2 on the rear surface side of the liquid crystal panel 1. The back light 4 has a flat shape and makes the directional illuminating light of the nearly parallel exit light distribution incident on the liquid crystal panel 1. On the other hand, the light diffusion plate 5 is disposed via the other polarizing plate 3 on the front surface side of the liquid crystal panel 1. The light diffusion plate 5 is used to diffuse and emit the directional illuminating light past the liquid crystal panel 1 and to convert the light to nondirectional light. The sufficient display lightness is obtd. even if the liquid crystal panel 1 is observed form the diagonal direction of the front surface side. The visual recognizability is thus improved.

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